

CLAIMS

What is claimed is:

1. In an aircraft flight management system having a flight management computer that stores a pre-planned lateral route of flight of the aircraft comprising a plurality of successive waypoints to be overflown, the next proximate waypoint being an active waypoint, a method providing a return-to-path maneuver in the event that the aircraft deviates from the pre-planned route, comprising:

selecting a new candidate active waypoint, and

calculating a return-to-path route to overfly the new active waypoint.

2. The method as set forth in claim 1 further comprising selectively accepting the calculated return-to-path route.

3. The method as set forth in claim 1 wherein the new candidate waypoint is the next proximate waypoint.

4. The method as set forth in claim 1 wherein the new candidate waypoint is the waypoint nearest the aircraft.

5. The method as set forth in claim 4 wherein the new candidate waypoint is the waypoint nearest to, but ahead of the aircraft.

6. The method as set forth in claim 1 wherein the new candidate waypoint is a down-path waypoint that results in a low recapture bank angle.

7. The method as set forth in claim 1 wherein the new candidate waypoint is a virtual waypoint.

8. The method as set forth in claim 7 wherein the virtual waypoint provides an intercept course to a successive waypoint.

9. The method as set forth in claim 8 wherein the calculated return-to-path route may be selectively accepted.

10. An aircraft flight management system having a flight management computer that stores a pre-planned lateral route of flight of the aircraft comprising a plurality of successive waypoints to be overflown, the next proximate waypoint being an active waypoint, a means for providing a return-to-path maneuver in the event that the aircraft deviates from the pre-planned route, means for selecting a new candidate active waypoint, and means for calculating a return-to-path route to overfly the new active waypoint.

11. The flight management system as set forth in claim 10 wherein the flight management computer has a memory for temporarily storing information and the new candidate waypoint is temporarily stored in the memory until the new candidate waypoint is selectively accepted.

12. The flight management system as set forth in claim 11 wherein, upon accepting the new candidate waypoint the pre-planned route is modified to include the new candidate waypoint.

13. The flight management system as set forth in claim 10 wherein the new candidate waypoint is the next proximate waypoint.

14. The flight management system as set forth in claim 10 wherein the new candidate waypoint is the waypoint nearest the aircraft.

15. The flight management system as set forth in claim 14 wherein the new candidate waypoint is the waypoint nearest to, but ahead of the aircraft.

16. The flight management system as set forth in claim 10 wherein the new candidate waypoint is a down-path waypoint that results in a low recapture bank angle.

17. The flight management system as set forth in claim 10 wherein the new candidate waypoint is a virtual waypoint.

18. The flight management system as set forth in claim 17 wherein the virtual waypoint provides an intercept course to a successive waypoint.

19. The flight management system as set forth in claim 18 wherein the calculated return-to-path route may be selectively accepted.